General

Title

Annual monitoring for patients on persistent medications: percentage of members 18 years of age and older who received at least 180 treatment days of ambulatory medication therapy for a select therapeutic agent during the measurement year and at least one therapeutic monitoring event for the therapeutic agent in the measurement year.

Source(s)

National Committee for Quality Assurance (NCQA). HEDIS 2016: Healthcare Effectiveness Data and Information Set. Vol. 1, narrative. Washington (DC): National Committee for Quality Assurance (NCQA); 2015. various p.

National Committee for Quality Assurance (NCQA). HEDIS 2016: Healthcare Effectiveness Data and Information Set. Vol. 2, technical specifications for health plans. Washington (DC): National Committee for Quality Assurance (NCQA); 2015. various p.

Measure Domain

Primary Measure Domain

Clinical Quality Measures: Process

Secondary Measure Domain

Does not apply to this measure

Brief Abstract

Description

This measure is used to assess the percentage of members 18 years of age and older who received at least 180 treatment days of ambulatory medication therapy for a select therapeutic agent during the measurement year and at least one therapeutic monitoring event for the therapeutic agent in the measurement year. For each product line, report each of the three rates separately and as a total rate.

Annual monitoring for members on angiotensin converting enzyme (ACE) inhibitors or angiotensin receptor blockers (ARBs)
Annual monitoring for members on digoxin

Annual monitoring for members on diuretics
Total rate (the sum of the three numerators divided by the sum of the three denominators)

This measure summary represents the total rate.

Rationale

Patient safety is highly important, especially for patients at increased risk of adverse drug events from long-term medication use. Persistent use of these drugs warrants monitoring and follow-up by the prescribing physician to assess for side-effects and adjust drug dosage/therapeutic decisions accordingly. The drugs included in this measure have deleterious effects in the elderly.

The costs of annual monitoring are offset by the reduction in health care costs associated with complications arising from lack of monitoring and follow-up of patients on long-term medications. The total costs of drug-related problems due to misuse of drugs in the ambulatory setting has been estimated to exceed $76 billion annually (Johnson & Bootman, 1995).

Appropriate monitoring of drug therapy remains a significant issue to guide therapeutic decision making and provides largely unmet opportunities for improvement in care for patients on persistent medications (Classen, 2003). Although there are no specific clinical guideline recommendations on the frequency of monitoring for the drugs identified in the measure, annual monitoring represents a conservative standard of care and is supported by U.S. Food and Drug Administration (FDA) drug labeling recommendations for each drug.

Evidence for Rationale

Classen D. Medication safety: moving from illusion to reality. JAMA. 2003 Mar 5;289(9):1154-6. PubMed

Johnson JA, Bootman JL. Drug-related morbidity and mortality. A cost-of-illness model. Arch Intern Med. 1995 Oct 9;155(18):1949-56. PubMed

National Committee for Quality Assurance (NCQA). HEDIS 2016: Healthcare Effectiveness Data and Information Set. Vol. 1, narrative. Washington (DC): National Committee for Quality Assurance (NCQA); 2015. various p.

Primary Health Components

Persistent medication therapy; therapeutic monitoring; annual monitoring; angiotensin converting enzyme (ACE) inhibitors; angiotensin receptor blockers (ARBs); digoxin; diuretics

Denominator Description

- *Rate 1*: *Annual monitoring for members on angiotensin converting enzyme (ACE) inhibitors or angiotensin receptor blockers (ARBs)*: Members age 18 years and older as of December 31 of the measurement year who received at least 180 treatment days of ACE inhibitors or ARBs during the measurement year
- *Rate 2*: *Annual monitoring for members on digoxin*: Members age 18 years and older as of December 31 of the measurement year who received at least 180 treatment days of digoxin during the measurement year
- *Rate 3*: *Annual monitoring for members on diuretics*: Members age 18 years and older as of December 31 of the measurement year who received at least 180 treatment days of a diuretic during the measurement year

See the related "Denominator Inclusions/Exclusions" field.

Numerator Description

- *Rate 1*: *Annual monitoring for members on angiotensin converting enzyme (ACE) inhibitors or angiotensin receptor blockers (ARBs)*: At least one serum potassium and a serum creatinine therapeutic monitoring test in the measurement year
- *Rate 2*: *Annual monitoring for members on digoxin*: At least one serum potassium, at least one serum creatinine, *and* at least one serum digoxin therapeutic monitoring test in the measurement year
- *Rate 3*: *Annual monitoring for members on diuretics*: At least one serum potassium *and* a serum creatinine therapeutic monitoring test in the measurement year

See the related "Numerator Inclusions/Exclusions" field.

Evidence Supporting the Measure

Type of Evidence Supporting the Criterion of Quality for the Measure

A formal consensus procedure, involving experts in relevant clinical, methodological, public health and organizational sciences

One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

Additional Information Supporting Need for the Measure

- Adverse drug events cause more than 700,000 visits to the emergency room (ER) each year (Centers for Disease Control and Prevention [CDC], 2012). The more medications people take, the higher their risk of having an adverse drug event (CDC, 2012).
- Approximately 1.5 million preventable adverse drug events occur in the United States each year, resulting in $3.5 billion in medical costs (Institute of Medicine [IOM], 2007).
- About 82 percent of adults in the United States take at least one medication (prescription or nonprescription drug, vitamin/mineral, herbal/natural supplement); 29 percent take five or more (Slone Epidemiology Center, n.d.).
- Severe adverse drug events can result in hospitalization. From 2007 to 2009, there were an estimated 99,628 emergency hospitalizations for adverse drug events in adults 65 years of age or older (Budnitz et al., 2011).
- Adverse drug events contribute to patient injury and increased health care costs. For patients on persistent medications, appropriate monitoring can reduce the occurrence of preventable adverse drug events.

Evidence for Additional Information Supporting Need for the Measure

Budnitz DS, Lovegrove MC, Shehab N, Richards CL. Emergency hospitalizations for adverse drug events in older Americans. N Engl J Med. 2011 Nov 24;365(21):2002-12. PubMed

Centers for Disease Control and Prevention (CDC). Adults and older adult adverse drug events. [internet]. Atlanta (GA): Centers for Disease Control and Prevention (CDC); 2012 [accessed 2015 Sep 21].

Institute of Medicine (IOM). Preventing medication errors: quality chasm series. Washington (DC): National Academies Press; 2007.

National Committee for Quality Assurance (NCQA). The state of health care quality 2015. Washington (DC): National Committee for Quality Assurance (NCQA); 2015. 205 p.

Slone Epidemiology Center. Patterns of medication use in the United States, 2006: a report from the Slone Survey. Boston (MA): Boston University; 25 p.

Extent of Measure Testing

All HEDIS measures undergo systematic assessment of face validity with review by measurement advisory panels, expert panels, a formal public comment process and approval by the National Committee for Quality Assurance's (NCQA's) Committee on Performance Measurement and Board of Directors. Where applicable, measures also are assessed for construct validity using the Pearson correlation test. All measures undergo formal reliability testing of the performance measure score using beta-binomial statistical analysis.

Evidence for Extent of Measure Testing

Rehm B. (Assistant Vice President, Performance Measurement, National Committee for Quality Assurance, Washington, DC). Personal communication. 2015 Mar 16. 1 p.

State of Use of the Measure

State of Use

Current routine use

Current Use

not defined yet

Application of the Measure in its Current Use

Measurement Setting

Ambulatory/Office-based Care

Managed Care Plans

Professionals Involved in Delivery of Health Services

not defined yet

Least Aggregated Level of Services Delivery Addressed

Single Health Care Delivery or Public Health Organizations

Statement of Acceptable Minimum Sample Size

Unspecified

Target Population Age

Age greater than or equal to 18 years

Target Population Gender

Either male or female

National Strategy for Quality Improvement in Health Care

National Quality Strategy Aim

Better Care

National Quality Strategy Priority

Making Care Safer
Prevention and Treatment of Leading Causes of Mortality

Institute of Medicine (IOM) National Health Care Quality Report Categories

IOM Care Need

Living with Illness

IOM Domain

Effectiveness

Safety

Data Collection for the Measure

Case Finding Period

The measurement year

Denominator Sampling Frame

Enrollees or beneficiaries

Denominator (Index) Event or Characteristic

Patient/Individual (Consumer) Characteristic

Therapeutic Intervention

Denominator Time Window

not defined yet

Denominator Inclusions/Exclusions

Inclusions

Rate 1: *Annual monitoring for members on angiotensin converting enzyme (ACE) inhibitors or angiotensin receptor blockers (ARBs)*: Members age 18 years and older as of December 31 of the measurement year who received at least 180 treatment days of ACE inhibitors or ARBs during the measurement year. Refer to Table CDC-L in the original measure documentation for a list of ACE inhibitors and ARBs.
Rate 2: *Annual monitoring for members on digoxin*: Members age 18 years and older as of December 31 of the measurement year who received at least 180 treatment days of digoxin during the measurement year. Refer to Table MPM-B in the original measure documentation for a list of drugs to identify members on digoxin.
Rate 3: *Annual monitoring for members on diuretics*: Members age 18 years and older as of December 31 of the measurement year who received at least 180 treatment days of a diuretic during the measurement year. Refer to Table MPM-C in the original measure documentation for a list of drugs to identify members on diuretics.

Note:

Members must have been continuously enrolled during the measurement year.
Allowable Gap: No more than one gap in enrollment of up to 45 days during the measurement year. To determine continuous enrollment for a Medicaid beneficiary for whom enrollment is verified monthly, the member may not have more than a 1-month gap in coverage.
Treatment days are the actual number of calendar days covered with prescriptions within the measurement year (i.e., a prescription of 90 days supply dispensed on December 1 of the measurement year counts as 30 treatment days). Sum the days supply for all medications and subtract any days supply that extends beyond December 31 of the measurement year.
Medications dispensed in the year prior to the measurement year must be counted toward the 180 treatment days.
Members may switch therapy with any medication listed in Table CDC-L during the measurement year and have the days supply for those medications count toward the total 180 treatment days (i.e., a member who received 90 days of ACE inhibitors and 90 days of ARBs meets the denominator definition for rate 1).
Members may switch therapy with any medication listed in Table MPM-C during the measurement year and have the days supply for those medications count towards the total 180 treatment days (rate 3).

Exclusions
Exclude members from each eligible population who had an acute inpatient encounter (Acute Inpatient Value Set) or nonacute inpatient encounter (Nonacute Inpatient Value Set) during the measurement year. (*Optional*)

Value Set Information
Measure specifications reference value sets that must be used for HEDIS reporting. A value set is the complete set of codes used to identify the service(s) or condition(s) included in the measure. Refer to the NCQA Web site to purchase HEDIS Volume 2, which includes the Value Set Directory.

Exclusions/Exceptions

not defined yet

Numerator Inclusions/Exclusions

Inclusions

Rate 1: *Annual monitoring for members on angiotensin converting enzyme (ACE) inhibitors or angiotensin receptor blockers (ARBs)*: At least one serum potassium and a serum creatinine therapeutic monitoring test in the measurement year. Any of the following during the measurement year meet criteria:

- A lab panel test (Lab Panel Value Set)
- A serum potassium test (Serum Potassium Value Set) *and* a serum creatinine test (Serum Creatinine Value Set)

Rate 2: *Annual monitoring for members on digoxin*: At least one serum potassium, at least one serum creatinine, *and* at least one serum digoxin therapeutic monitoring test in the measurement year. Any of the following during the measurement year meet criteria:

- A lab panel test (Lab Panel Value Set) *and* a serum digoxin text (Digoxin Level Value Set)
- A serum potassium test (Serum Potassium Value Set) *and* a serum creatinine test (Serum Creatinine Value Set) *and* a serum digoxin text (Digoxin Level Value Set)

Rate 3: *Annual monitoring for members on diuretics*: At least one serum potassium *and* a serum creatinine therapeutic monitoring test in the measurement year. Any of the following during the measurement year meet criteria:

- A lab panel test (Lab Panel Value Set)
- A serum potassium test (Serum Potassium Value Set) *and* a serum creatinine test (Serum Creatinine Value Set)

Note:

The tests do not need to occur on the same service date, only within the measurement year.
Total rate (the sum of the three numerators divided by the sum of the three denominators)

Exclusions
Unspecified

Value Set Information
Measure specifications reference value sets that must be used for HEDIS reporting. A value set is the complete set of codes used to identify the service(s) or condition(s) included in the measure. Refer to the NCQA Web site to purchase HEDIS Volume 2, which includes the Value Set Directory.

Numerator Search Strategy

Fixed time period or point in time

Data Source

Administrative clinical data

Pharmacy data

Type of Health State

Does not apply to this measure

Instruments Used and/or Associated with the Measure

Unspecified

Computation of the Measure

Measure Specifies Disaggregation

Measure is disaggregated into categories based on different definitions of the denominator and/or numerator

Basis for Disaggregation

This measure is disaggregated based on different definitions of the denominator and numerator. For each product line, report each of the three rates separately and as a combined rate.

Denominators:

Rate 1: *Annual monitoring for members on angiotensin converting enzyme (ACE) inhibitors or angiotensin receptor blockers (ARBs)*: Members age 18 years and older as of December 31 of the measurement year who received at least 180 treatment days of ACE inhibitors or ARBs during the measurement year.
Rate 2: *Annual monitoring for members on digoxin*: Members age 18 years and older as of December 31 of the measurement year who received at least 180 treatment days of digoxin during the measurement year.
Rate 3: *Annual monitoring for members on diuretics*: Members age 18 years and older as of December 31 of the measurement year who received at least 180 treatment days of a diuretic during the measurement year.

Numerators:

Rate 1: *Annual monitoring for members on angiotensin converting enzyme (ACE) inhibitors or angiotensin receptor blockers (ARBs)*: At least one serum potassium and a serum creatinine therapeutic monitoring test in the measurement year.
Rate 2: *Annual monitoring for members on digoxin*: At least one serum potassium, at least one serum creatinine, *and* at least one serum digoxin therapeutic monitoring test in the measurement year.
Rate 3: *Annual monitoring for members on diuretics*: At least one serum potassium *and* a serum creatinine therapeutic monitoring test in the measurement year.

Scoring

Rate/Proportion

Interpretation of Score

Desired value is a higher score

Allowance for Patient or Population Factors

not defined yet

Description of Allowance for Patient or Population Factors

This measure requires that separate rates be reported for commercial, Medicaid, and Medicare product lines.

Standard of Comparison

not defined yet

Identifying Information

Original Title

Annual monitoring for patients on persistent medications (MPM).

Measure Collection Name

HEDIS 2016: Health Plan Collection

Measure Set Name

Effectiveness of Care

Measure Subset Name

Medication Management

Submitter

National Committee for Quality Assurance - Health Care Accreditation Organization

Developer

National Committee for Quality Assurance - Health Care Accreditation Organization

Funding Source(s)

Unspecified

Composition of the Group that Developed the Measure

National Committee for Quality Assurance's (NCQA's) Measurement Advisory Panels (MAPs) are composed of clinical and research experts with an understanding of quality performance measurement in the particular clinical content areas.

Financial Disclosures/Other Potential Conflicts of Interest

In order to fulfill National Committee for Quality Assurance's (NCQA's) mission and vision of improving health care quality through measurement, transparency and accountability, all participants in NCQA's expert panels are required to disclose potential conflicts of interest prior to their participation. The goal of this Conflict Policy is to ensure that decisions which impact development of NCQA's products and services are made as objectively as possible, without improper bias or influence.

Endorser

National Quality Forum - None

NQF Number

not defined yet

Date of Endorsement

2014 Nov 10

Adaptation

This measure was not adapted from another source.

Date of Most Current Version in NQMC

2015 Oct

Measure Maintenance

Unspecified

Date of Next Anticipated Revision

Unspecified

Measure Status

This is the current release of the measure.

This measure updates previous versions:

> National Committee for Quality Assurance (NCQA). HEDIS 2015: Healthcare Effectiveness Data and Information Set. Vol. 1, narrative. Washington (DC): National Committee for Quality Assurance (NCQA); 2014. various p.
> National Committee for Quality Assurance (NCQA). HEDIS 2015: Healthcare Effectiveness Data and Information Set. Vol. 2, technical specifications for health plans. Washington (DC): National Committee for Quality Assurance (NCQA); 2014. various p.

Measure Availability

Source available for purchase from the National Committee for Quality Measurement (NCQA) Web site

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For more information, contact NCQA at 1100 13th Street, NW, Suite 1000, Washington, DC 20005; Phone: 202-955-3500; Fax: 202-955-3599; Web site: www.ncqa.org .

Companion Documents

The following are available:

National Committee for Quality Assurance (NCQA). The state of health care quality 2015. Washington (DC): National Committee for Quality Assurance (NCQA); 2015 Oct. 205 p.
National Committee for Quality Assurance (NCQA). HEDIS 2016: Healthcare Effectiveness Data and Information Set. Vol. 2, technical update. Washington (DC): National Committee for Quality Assurance (NCQA); 2015 Oct 1. 12 p.

For more information, contact the National Committee for Quality Assurance (NCQA) at 1100 13th Street, NW, Suite 1000, Washington, DC 20005; Phone: 202-955-3500; Fax: 202-955-3599; Web site: www.ncqa.org .

NQMC Status

This NQMC summary was completed by ECRI on June 6, 2006.

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This NQMC summary was updated by ECRI Institute on January 30, 2010 and on May 20, 2011.

This NQMC summary was retrofitted into the new template on July 1, 2011.

This NQMC summary was updated by ECRI Institute on September 14, 2012, April 30, 2013, January 23, 2014, February 11, 2015, and again on January 29, 2015.

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Production

Source(s)

National Committee for Quality Assurance (NCQA). HEDIS 2016: Healthcare Effectiveness Data and Information Set. Vol. 1, narrative. Washington (DC): National Committee for Quality Assurance (NCQA); 2015. various p.

National Committee for Quality Assurance (NCQA). HEDIS 2016: Healthcare Effectiveness Data and Information Set. Vol. 2, technical specifications for health plans. Washington (DC): National Committee for Quality Assurance (NCQA); 2015. various p.

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